INFORMATION TECHNOLOGY PROJECT REQUEST (ITPR)

Guidelines & Instructions

for

MARYLAND STATE AGENCIES

Fiscal Year 2006

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Section 1.0: Introduction

1.1 Overview

The State of Maryland Information Technology Project Request (ITPR) process exists to ensure that all Maryland State Agencies follow a standardized approach to requesting Information Technology (IT) funds that support the Agency's Information Technology Master Plan (ITMP) and are consistent with State IT goals and objectives. The Agency ITPR submission details the schedule and cost aspects of an Agency's IT investment request.

1.2 Purpose

This document provides guidance and instructions for the Agency Information Technology Project Request process in support of an Agency's five-year IT strategic plan, which captures the fiscal year 2006 – 2010 IT budget request.

1.3 Scope

These guidelines and instructions apply to all units of the Executive Branch of Maryland State Government, including public institutions of higher education other than the University System of Maryland, and any Agency requesting IT funds through the Information Technology Project Request (ITPR) process and/or the Major Information Technology Development Project Fund (MITDPF) as stated in Chapters 467 and 468, Acts of 2002, as mandated by *State Finance and Procurement Title 3 § 3-403*.

1.4 Outcome

The ITPR process seeks to accomplish the following goals:

- Ensure consistency of IT project investments with State IT goals and objectives;
- Ensure consistency of IT project investments with an Agency's IT strategic planning document(s);
- Provide documentation regarding project detail of an IT project investment;
- Capture schedule and cost detail for Agency IT project requests;
- Provide foundational information to determine the State IT Project Portfolio;
- Provide a consistent and repeatable process in support of the "Select", "Control", and "Evaluate" model for State IT Project Portfolio management; and
- Ensure uniformity of IT project request submission.

1.5 Maryland Operating Budget

Information collected from the FY06 Agency ITPR submissions that receive allowance are reviewed and used for publication in the Maryland Operating Budget for FY06. It is critical that ITPR information is entered accurately and completely.

Section 2.0: ITPR Instructions & Format

2.1 General Preparation Instructions

The Agency IT Project Request submissions should encompass a five-year project detail reporting period.

IT Project Input Detail is divided into the following sections:

- <u>Section 1A.</u> General Information
- <u>Section 1B.</u> Project Information
- <u>Section 1C.</u> Schedule
- <u>Section 1D.</u> Cost
  - Project Phase Cost by Fund
  - Project Expenditures by Comptroller Object

2.2 Agency ITPR Format and Content

The following section provides instruction on completion of the ITPR form. For your reference, Attachment A contains a completed ITPR, which can be used as a model.

2.2.1 IT Project Input Detail

Section 1 of the IT Project Request form seeks to capture the detail of a specific IT project. This section is divided into four sub-sections, General Information, Project Information, Schedule and Cost. This information will provide the basis with which IT projects are assessed and evaluated to determine whether to begin, or continue, investment of a specific initiative. Specific instructions for this section are as follows:

Section 1A. General Information
A. <u>Agency</u>: Enter the full name of your Agency.

B. <u>Project Title</u>: Provide a concise title that will be the same as the title provided on the project summary of the IT Master Plan.

C. <u>Executive Business Sponsor</u>: Enter the full names of the Executive Business Sponsors of the project.

D. <u>IT Project Manager</u>: Enter the full name of the IT project manager.

E. <u>Agency Senior Management Review</u>: OIT requires that your IT Project Requests be reviewed and approved by the Executive Business Sponsor, the Agency CIO and the Agency CFO. Please indicate that this has occurred by checking the appropriate

boxes accordingly. Please enter the names of the Executive Business Sponsor, Agency CIO, and Agency CFO completing the required signoff.

F. <u>Budget</u>:

   1. <u>Appropriation Code</u>: Enter the eight-digit RSTARS appropriation code.
   2. <u>Sub Program Code</u>: Enter the four-digit RSTARS appropriation code.
   3. <u>PCA Code</u>: Enter the five digit RSTARS program cost account code.

G. <u>Over CSB (Y/N)</u>: Indicate with a "Yes" or "No" if the project is over the "Current Services Budget" (i.e., unfunded).

H. <u>Project Level</u>: Indicate whether the project level is "New" or "Ongoing" by marking the appropriate check box.

I. <u>Project Plan Number</u>: Provide a two-digit Project Plan Number that is a unique identifier of the project (e.g., 01, 02, 03). This identifier usually correlates to the Agency project numbering scheme cited in the Agency ITMP.

J. <u>Project Type</u>: Indicate whether the project is New Development, System Enhancement, IT Infrastructure, or Other.

   <u>Definitions of Project Type</u>

   1. <u>New Development</u>: Projects that involve the development and deployment of a system to support a new or changed business function, to replace an existing system which can no longer fulfill business needs, or to automate functions being done manually. New Development includes any COTS packages that will be procured as an IT solution.
   2. <u>System Enhancement</u>: Projects that involve significant modifications to the requirements and/or design of an existing system.
   3. <u>IT Infrastructure</u>: Projects that involve the installation of new or replacement hardware, cabling, or system software products.
   4. <u>Other</u>: If the project is none of the preceding types, then indicate the project type as "Other" and provide an explanation describing the type of project.

K. Project Classification:

1. Major (Y/N): Indicate whether the project qualifies as a major IT development project. A major IT development project is defined as a new IT project, and the enhancement of existing IT project, whose total of all phase costs equals or exceeds $1 million, or a project designated as major IT development projects by the Agency CIO or State CIO.
2. Program Code (Y/N): Indicate whether a separate Agency MITDP appropriation program code has been established.
3. Cross Cutting (Y/N): Indicate by selecting "Yes" or "No" if the project impacts multiple Agencies, federal/local government or involves the sharing of information across those entities.

Section 1B. Project Information
A. Project Description: Describe the project in general – why the project is being done; scope of the project – what is being done; and the expected performance outcome at project completion – what the end result will be. Projects should be defined in terms that can be understood by non-technical managers. The description should be described in terms of the business function supported.

B. Project Status: Provide a summary of the current status of the project. This should be the project phase in the System Development Life Cycle and should include time and cost status – on time and on budget, etc. for that phase.

Definitions of Project Status

1. Initiation: The period of time that begins when management determines that it is necessary to enhance a business process through the application of information technology. The purposes of the Initiation Phase are to: identify and validate an opportunity to improve business accomplishments; identify significant assumptions and constraints on solutions; recommend the exploration of alternative concepts and methods to satisfy the need. During this phase the Program Sponsor designates a Project Manager who prepares a Statement of Need or Concept Proposal.
2. Concept Development: The period of time that begins when the Concept Proposal has been formally approved and requires study and analysis that may lead to system development activities.
3. Planning: The period of time in which a comprehensive plan for the recommended approach is prepared.
4. Requirements Analysis: The period of time during which the requirements for a software product are formally defined and documented.
5. Design: The period of time during which the designs for architecture, software components, interfaces, and data are created, documented, and verified to satisfy requirements.
6. Development: The period of time to convert the deliverable of the Design Phase into a complete system.

7. <u>Integration and Test</u>: The period of time during which subsystem integration, system security, and user acceptance testing are conducted.
8. <u>Implementation</u>: The period of time for installing and testing the final system.
9. <u>Operations and Maintenance</u>: The period of time during which a software product is employed in its operational environment, monitored for satisfactory performance, and modified as necessary to correct problems or to respond to changing requirements.
10. <u>Disposition</u>: The period of time when a system has been declared surplus and/or obsolete and the task performed is either eliminated or transferred to other systems.

C. <u>IT Solution</u>: This section is divided into the following eight sub-sections:

1. <u>Technology</u>: Provide a summary of the technology that will be used to satisfy the business need when the system is implemented.
2. <u>Program Strategic Goals</u>: Provide a summary of how this investment supports your Agency mission, goals and objectives, as defined in the Agency MFRs. Please provide narrative when referring to Managing For Results (MFR) goals and objectives.
3. <u>Critical Success Factors</u>: Identify the three most important technical and/or business factors critical to the success of this project and how they will be monitored.
4. <u>Major Stakeholders</u>: Identify the Major Stakeholders of the project. Stakeholders are those who have a vested interest in and will be impacted by the outcome of implementation of the project.
5. <u>Major Customers</u>: Identify the major customers that the project will target when implemented. Customers are direct recipients of the project's products or services.
6. <u>External Dependencies</u>: Identify the external dependencies and issues that must be resolved before major milestones can be achieved. External Dependencies are any items that are outside of the scope of the project, but upon which the project relies and is dependent. External dependencies should be viewed as relationships and managed as risks. Please identify IT and non-IT related external dependencies. Also, indicate any special requirements that are needed to implement the project such as network (LAN/WAN), desktop, software, etc.
7. <u>Acquisition Strategy</u>: Provide a summary of the Acquisition Strategy that will be used to acquire the goods or services needed to implement the project.
8. <u>Authority/Mandate</u>: Select "Yes" or "No" if there is a legal or regulatory authority that requires the Agency to pursue the project. If selecting "Yes", cite authority and provide an explanation of the legislation, mandate, authority, etc.

   Note: It is important to accurately record this indicator, as the information will have bearing on the "Selection" process for funding consideration for projects.

If completed, the following information can be extracted from the System Boundary Document as defined in the SDLC. For projects under development, this information

may be located in the System Boundary Document, Functional Requirements, Acquisition Strategy, or System Design Document as defined in the SDLC.

D. <u>Business Need Justification</u>: Provide a summary of the business need and supporting justification for investment in this project. The narrative should clearly indicate why the project is required.

E. <u>Benefits</u>:

1. <u>External</u>: Provide a summary of the anticipated external benefits of the project when implemented. An external benefit is one that is realized by a stakeholder or customer of the system. The narrative should include quantifiable (example - reducing transaction turnaround time from 15 days to 10), where possible.

2. <u>Internal</u>: Provide a summary of the anticipated internal benefits of the project when implemented. An internal benefit is one that is realized within the business unit that owns the system. The narrative should include quantifiable benefits, such as business process savings, staff efficiencies, etc., where possible.

3. <u>Return On Investment (ROI)</u>: Identify the anticipated ROI when the project is implemented. The ROI is another way of looking at the investment by considering the cost in relation to the "profit" or return on an investment. A primary component of ROI is benefit, or payback. Benefits are typically identified as either tangible or intangible.

   Tangible benefits are those benefits that are "capable of being appraised at an actual or approximate value". Intangible benefits are those benefits that cannot be assigned a dollar value. An example of an intangible benefit is "flexibility". This could be defined as a proposed system that may allow a manager to have two or three different people perform the same job without significant training expense. Benefits should always be linked to performance measures.

   If the benefits of a project are tangible, Agencies should use the calculation method shown below to determine ROI. If they are determined to be intangible the Agency should provide a summary that clearly describes the intangible benefits of the project.

   When providing ROI analysis, please calculate a "percentage" using the following calculation. The objective is to identify and rank those alternatives whose benefits outweigh cost, maximizing return for State government.

   a. <u>The mathematics of ROI Calculation</u>

      Three data points are required:

      1. Time period – Typically one year.

2. Investment – Typically includes the cost of hardware, software, software licenses, professional services, and maintenance over the time period being considered.
3. Return – The sum of the cost savings and revenue enhancements gained.

To calculate as a Percentage:

Example 1
If a customer gains benefits (payback) of $1,000,000 in 12 months on a total investment of $250,000 in the same time period, their ROI expressed as a percentage can be calculated as follows:

> If, Return = Payback – Investment;
> ROI = [(Payback – Investment)/Investment)] * 100,
> or in this case:
> [($1,000,000 - $250,000)] / $250,000 * 100 = 300%

F. <u>Major Risks</u>: all projects contain uncertainty and risk. The process of identifying those risks and planning appropriate responses should they occur is defined as Risk Management. Risk Management consists of:

1. Assessing the probability of a risk factor occurring,
2. Estimating the negative impact should the risk occur, and
3. Determining the appropriate action to take based on 1 and 2.

Appropriate responses to identified risks fall into three broad categories:

1. Risk Avoidance – taking action to eliminate the probability of the risk. This category is generally considered when the probability of the risk is high and the consequence is significant, or when the consequence is so significant as to present a fatal threat to the project.
2. Risk Mitigation – planning action to take to minimize the negative impact of the risk should it occur. This category of response is generally considered when the consequence of the risk factor is of medium severity.
3. Risk Acceptance – no action is planned should the risk factor occur. This category of response is generally considered when the consequence of the risk factor is low and does not warrant the cost of potential mitigation or avoidance strategies.

In this section, identify the major factors or events that could cause the project to experience significant difficulties or failure (risk identification) as well as any planned actions to make the consequences of those events acceptable (risk response). Attachments B (areas of possible risk) and Attachment C (potential response strategies) are provided as a reference.

Also include in this section:

Known or Anticipated Scope Change: Provide a summary of any major scope changes to the project that have impacted or will adversely impact budget and schedule.

Known or Anticipated Cost Change: Provide a summary of any known or anticipated changes to cost that have impacted or will adversely impact budget and schedule.

G. Security and Privacy Requirements: Provide a summary of your plan that addresses security, privacy and disaster recovery. If this is an existing system, indicate whether the security/privacy/disaster recovery plan is in place. If a plan hasn't been developed, describe when and how a plan will be implemented to address these critical requirement areas.

H. Architecture and IT Policy Conformance: Provide a summary of key Agency architectural standards and policies applicable to this project.

Section 1C. Schedule
Figure 1 is an example of the input table that is part of the ITPR form. Agencies are asked to list the major lifecycle milestones, by Systems Development Life Cycle (SDLC) phase, for the project. Up to five milestones can be input for each phase. If an iterative development approach or multi-task task orders are employed for the project, and if the phases overlap for a budget year, clearly differentiate to which iteration each milestone relates (e.g. a two phase, or two-staged, project would have its various milestones identified as "Phase I" and "Phase II" respectively). Project Assessments should be conducted at the completion of each major milestone beginning at the Concept Phase to help assess the progress and health of the project.

Figure 1. IT Project Major Milestones by SDLC Phase

Phase	Major Milestones	Planned Start Date	Actual Start Date	Planned End Date	Actual End Date
Initiation/Concept					
Planning/Req. Analysis					
Design / Development / Integration / Test					
Implementation					
Operations / Maintenance					
Disposition *(Not required)*					

Section 1D. Cost
In this section the estimated or ongoing cost of a project is captured in two tables. The first table, Figure 2, Project Phase Cost, captures cost by consolidated Systems Development Life Cycle (SDLC) phase, and by fund category. The funding categories are divided into General Fund, Special Fund, Federal Fund, and Reimbursable Fund categories.

O&M costs reflected must include the *total cost of ownership*, including the costs for: development; training; assuring integrity; data confidentiality; and system availability. The O&M cost must also include the hardware and software necessary to meet security requirements and recovery capability based on the system's functional requirements, including training and disaster recovery planning and testing.

Figure 2. Project Phase Cost by Fund

General Funds	Prior to FY04	Actual FY04	Approp FY05	Budget Req FY06	Gov Allow FY06	Projected FY07	Projected FY08	Projected FY09	Projected FY10	Total GF
Initiation/Concept										
Planning/Req. Analysis										
Design/Development /Integration/Test										
Implementation										
Operations/ Maintenance										
TOTAL GF										
Special Funds Excluding MITDPF	Prior to FY04	Actual FY04	Approp FY05	Budget Req FY06	Gov Allow FY06	Projected FY07	Projected FY08	Projected FY09	Projected FY10	Total SF Excl MITDPF
Initiation/Concept										
Planning/Req. Analysis										
Design/Development /Integration/Test										
Implementation										
Operations/ Maintenance										
TOTAL SF (Excl MITDPF)										
Special Funds MITDPF	Prior to FY04	Actual FY04	Approp FY05	Budget Req FY06	Gov Allow FY06	Projected FY07	Projected FY08	Projected FY09	Projected FY10	Total SF MITDPF
Initiation/Concept	$$$$$		$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	
Planning/Req. Analysis										
Design/Development /Integration/Test										
Implementation										
Operations/ Maintenance										
TOTAL SF (MITDPF)										
Special Funds Summary	Prior to FY04	Actual FY04	Approp FY05	Budget Req FY06	Gov Allow FY06	Projected FY07	Projected FY08	Projected FY09	Projected FY10	Total SF
Initiation/Concept										
Planning/Req. Analysis										
Design/Development /Integration/Test										
Implementation										
Operations/ Maintenance										
TOTAL SF										
Federal Funds	Prior to FY04	Actual FY04	Approp FY05	Budget Req FY06	Gov Allow FY06	Projected FY07	Projected FY08	Projected FY09	Projected FY10	Total FF
Initiation/Concept	$$$$$		$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$
Planning/Req. Analysis	$$$$$		$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$
Design/Development /Integration/Test	$$$$$		$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$
Implementation	$$$$$		$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$
Operations/ Maintenance	$$$$$		$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$
TOTAL FF	$$$$$		$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$	$$$$$
Reimbursable Funds	Prior to FY04	Actual FY04	Approp FY05	Budget Req FY06	Gov Allow FY06	Projected FY07	Projected FY08	Projected FY09	Projected FY10	Total RF
Initiation/Concept										
Planning/Req. Analysis										
Design/Development /Integration/Test										
Implementation										
Operations/ Maintenance										
TOTAL RF										
TOTAL ALL FUNDS										

The second table, Figure 3, Project Expenditures by Comptroller Object, captures total project cost by Comptroller Object Code.

Figure 3.   Project Expenditures by Comptroller Object

Comptroller Object Codes	Prior to FY03	Actual FY03	Approp FY04	Budget Req FY05	Gov Allow FY05	Projected FY06	Projected FY07	Projected FY08	Projected FY09	Total
01. Salaries, wages										
02. Technical and fees										
03. Communications										
04. Travel										
06. Fuel and Utilities										
07. Motor Vehicle Oper. and Maint.										
08. Contractual Services										
09. Supplies and Materials										
10. Equipment Replacement										
11. Equipment Additional										
12. Grants, Subsid. and Contrib.										
13. Fixed Charges										
14. Land and Structures										
TOTAL										

Section 3.0: Submission Requirements

3.1 Submission Procedure

Agency IT Project Request submissions are to be completed on the Information Technology Advisory Council (ITAC) web site by COB **August 31, 2004**. ITPR submissions must be consistent with the information contained in each Agency's respective ITMP, specifically Section 3.2.4, Agency IT Investment Portfolio.

3.2 DBM OIT Staff Assistance

OIT staff members are available to assist Agencies with ITPR planning activities. For information or assistance please contact one of the following ITIM Analysts:

- Mark Bittner; 410-260-7987; mbittner@dbm.state.md.us
- Joann Butler, 410-260-7571; jbutler@dbm.state.md.us
- Wayne Petrush, 410-260-7882; wpetrush@dbm.state.md.us
- Pat Wade, 410-260-7062; pwade@dbm.state.md.us

Section 4.0: Review & Approval

Agency IT Project Requests will be reviewed by various organizations: DBM OIT, DBM Office of Budget Analysis (OBA), and the Department of Legislative Services (DLS). ITPRs will be evaluated for consistency with the Agency's ITMP and State IT legislated policy, standards, and procedures.

The annual appropriation will constitute the formal approval of an Agency's ITPR for the budget request year. Inclusion of new initiatives in the appropriation will constitute tentative approval of multi-year projects, subject to future funding availability. Agencies are required to update the ITPR data via the ITAC web site with the Governor's Allowance budget detail prior to January 8, 2005.